

IN THE SPECIFICATION:

Please replace the Summary of Invention section on page 3, line 23 through page 4, line 24 with the following amended section:

--The present invention has been made in light of these problems, and accordingly, is an object of the present invention to enable dynamic creating of constraining shapes in a compounded real space, and to enable easy operating of virtual objects using constraining shapes even where constraining shapes have not been registered beforehand.

In order to achieve the above objects, according to a first aspect of the present invention, ~~an information processing device, for aiding operations relating to position and orientation of a virtual object positioned in three-dimensional space, comprises: image-taking means for taking images in real space in order to display the virtual object in a superimposed manner on real space; synthesizing means for synthesizing a virtual object with the taken image; operating means for operating the position and orientation of the virtual object; and aiding means for obtaining a three-dimensional position of real space from external instructions, and obtaining a constraining shape for aiding in operations for the position and orientation of the virtual object; wherein the position and orientation of the virtual object are operated by instructions from the operating means, based on constraint conditions based on the constraining shape obtained by the~~ aiding means: an information processing device for aiding control operations relating to controlling the position and orientation of a virtual object comprises image-capturing means for capturing a real image in real space, virtual image generation means for generating a virtual image of a virtual object according to the position and orientation of

the image capturing means and superimposed means for superimposing the generated virtual image with the captured real image. The device also comprises inputting means for inputting three-dimensional position information of a plurality of positions inputted by a user in the real space, setting means for setting a constraining shape based on the inputted three-dimensional position information, and operating means for performing an operation controlling the position and the orientation of the virtual object based on the constraining shape in accordance with a user's instructions.

According to another aspect of the present invention, an information processing method for changing the position and orientation of a virtual object in mixed reality space obtained by combining a real image and a virtual image comprises the steps of obtaining a constraining shape from a plurality of positions in real space designated by a user using an operating unit capable of obtaining three-dimensional positional information, changing the position and orientation of the virtual object according to instructions from the user, based on the obtained constraining shape as constraint conditions, and combining an image of the virtual object generated according to the changed position and orientation, and the real image, to obtain a mixed reality image.

Further objects, features and advantages of the present invention will become apparent from the following description of the preferred embodiments with reference to the attached drawings.--